

Date: Fri, 22 Jan 93 23:38:11 PST  
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>  
Errors-To: Info-Hams-Errors@UCSD.Edu  
Reply-To: Info-Hams@UCSD.Edu  
Precedence: Bulk  
Subject: Info-Hams Digest V93 #99  
To: Info-Hams

Info-Hams Digest                        Fri, 22 Jan 93                        Volume 93 : Issue 99

Today's Topics:

Coax voltage - How to computer?  
Consider this about roof mounted mobile antennas...  
CW Contests at Hamfests  
DESPERATELY SEEKING AIR VARIABLE CAPACITORS  
DSP and The Future  
Ham Radio Causes Cancer  
Ham Radio Causes Cancer!  
Icom U200T manual / info wanted  
I PASSED!!! (was Format of Code Exams?)  
Log-Yagis  
mfj swr meter info wanted  
Microwave tube data  
Real Hams... ALL!  
Real NoCodes  
running 300-ohm twinlead thru wood  
TM-732 Intermod (was:Kenwood tm-732 mod/functions)

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>

Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>

Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

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Date: Fri, 22 Jan 1993 20:35:09 GMT  
From: usc!elroy.jpl.nasa.gov!sdd.hp.com!hpscit.sc.hp.com!hplextra!hpl-opus!  
hpnmldla!alanb@network.UCSD.EDU  
Subject: Coax voltage - How to computer?  
To: info-hams@ucsd.edu

In rec.radio.amateur.misc, hgpeach@ms.uky.edu (Harold G. Peach, Jr.) writes:

>A recent posting regarding voltage on twin-lead prompted me to ask  
>a question I have had for some length of time: How do you compute  
>the transmitted voltage on a coax, given the power? You have  
>the impedance of the coax to work with, but some ham friends have  
>told me SQRT(RP) adjusted for RMS does not yield an accurate transmitted  
>voltage or current.

Assuming you are using an antenna tuner or other means of matching the SWR at the transmitter end of the coax, the maximum RMS voltage (at the peak of the standing wave) is:

SQRT (R \* P \* SWR)

The peak voltage is 1.4 times this.

AL N1AL

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Date: Fri, 22 Jan 93 21:01:24 PST  
From: gumby!destroyer!cs.ubc.ca!mala.bc.ca!oneb!ham!emd@yale.arpa  
Subject: Consider this about roof mounted mobile antennas...  
To: info-hams@ucsd.edu

brian@ucsd.edu (Brian Kantor) writes:

> jmcoving@unccsun.uncc.edu (John Covington WN4BBJ) writes:  
> >... But make sure you use an NMO mount so it will be  
> compatible! Larson, and probably others, have mounts which are not  
> NMO-compatible; and if you use one of those mounts you will be stuck.  
>  
> But the regular Larsen mount fits in a 5/8" hole, whereas the NMO goes  
> into a 3/4" hole. So if you blew it and used the regular Larsen mount,  
> you can always enlarge the hole and put an NMO into it.  
>  
> Of course, you'll have to buy the NMO mount, and reconnect the coax to  
> it. Better to do it right the first time.  
>  
> Motorola uses a special NMO with super-low-loss Teflon/silver coax for  
> their 900 MHz radios. If you're going to be running 450 MHz in the car,  
> you might well invest it one of those instead of the plain coax model  
> that the typical ham store carries. Your local two-way shop will probably  
> have some in stock. They'll even do the install for you if you like.  
> - Brian

And, as a cursory glance at the Larsen catalog will show you, Larsen

makes lots of antennas for either style of mount. Tough, well made, and Larsen stands behind 'em, in my experience.

Robert Smits VE7EMD Ladysmith B.C. e-mail: emd@ham.almanac.bc.ca

The first thing we do, let's kill all the lawyers. King Henry VI, Part 2

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Date: Fri, 22 Jan 1993 20:10:57 GMT

From: sdd.hp.com!hpscit.sc.hp.com!hplextra!hpl-opus!hpnmrla!alanb@network.UCSD.EDU  
Subject: CW Contests at Hamfests  
To: info-hams@ucsd.edu

In rec.radio.amateur.misc, adams@chuck.dallas.sgi.com (Charles Adams) writes:

>WANTED: information of typical formats for CW contests at local, state,  
> and national hamfests

Years ago, I participated in an interesting CW contest at the Rochester (NY) hamfest. They picked a nice slow speed (20 wpm), but gradually increased the noise level / reduced the signal level as the contest progressed. The last person still copying correctly was to be the winner.

I did OK until about 3 minutes before the end I finally gave up. There were still about 3 guys madly scribbling when the test finally ended. At that point the umpire admitted that there had been no signal at all present for the last 2 minutes of the test!

>as a footnote. how about tone frequencies? i know some are going to claim  
>tone deaf for some freqs, etc.

Our local club has built a multi-station code test box. Each headphone jack has its own separate oscillator with volume and pitch control. All the oscillators are keyed simultaneously from a control box. The control box includes a circuit that converts the incoming code audio from a tape recorder into the keying voltage that controls the oscillators. We bought a batch of headphones (\$2 each) at the SCRA flea market last year, or the testee can bring his own. (Both 1/4" and 1/8" jacks provided.)

AL N1AL

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Date: Fri, 22 Jan 1993 20:30:25 GMT

From: sdd.hp.com!hpscit.sc.hp.com!hplextra!hpl-opus!hpnmrla!alanb@network.UCSD.EDU  
Subject: DESPERATELY SEEKING AIR VARIABLE CAPACITORS

To: info-hams@ucsd.edu

In rec.radio.amateur.misc, stickler@klaava.Helsinki.FI (Patric M Stickler) writes:

>I am trying to locate some surplus air variable capacitors for use in a  
>transmatch. They only have to be able to handle around 150 watts, and can be  
>of any age/make as long as they are functional/reliable.

>I need one (1) 200pF and one (1) dual 200pF capacitor.

If you can find an old tube-type AM radio, you can cannibalize the tuning capacitor from it. Generally there are two sections: the antenna tuning section is about 360-400 pF and the local oscillator section about 200 pF. The plate spacing should be fine for 150 watts. For the dual capacitor, you can remove plates from the rotor of the oscillator section to get down to 200 pF.

AL N1AL

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Date: 23 Jan 1993 06:41:38 GMT  
From: mintaka.lcs.mit.edu!ai-lab!hal.gnu.ai.mit.edu!regnad@yale.arpa  
Subject: DSP and The Future  
To: info-hams@ucsd.edu

Ah ha! So other people \*have\* had the same idea I got about 7 or 8 years ago. :) That is, apply DSP to the IF of a standard receiver to witness the greatest advance in performance since the vacuum diode replaced the coherer. :) The best possible scenario I can think of would be a 455 KHz add on DSP box. This would make any receiver with a decent front end and a 455 KHz IF nothing short of an absolute marvel. This is one solid state device I would not mind being able to hang on my vacuum tube radios.

Paul Prescott  
regnad@gnu.ai.mit.edu

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Date: Sat, 23 Jan 1993 06:29:55 GMT  
From: usc!howland.reston.ans.net!zaphod.mps.ohio-state.edu!rpi!  
cary102.its.rpi.edu!mellob@network.UCSD.EDU  
Subject: Ham Radio Causes Cancer  
To: info-hams@ucsd.edu

There was an interesting article in February, 93 Of Popular Electronics about the effects of radio waves on biological stuff. It was very

informative. Although completely unfounded, I have always had a policy about not going near antennae radiating high-power on very high frequencies. I would be interested in any Information or articles on this matter, or even books dealing with the topic. Please post or e-mail.

-Brett Mellor                           mellob@rpi.edu  
Rensselaer Polytechnic Institute  
Troy, New York

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Date: Fri, 22 Jan 1993 20:43:24 GMT  
From: usc!elroy.jpl.nasa.gov!sdd.hp.com!hpscit.sc.hp.com!hplextra!hpl-opus!  
hpnmrla!alanb@network.UCSD.EDU  
Subject: Ham Radio Causes Cancer!  
To: info-hams@ucsd.edu

Some time ago, several people asked me for a copy of Dr Milham's famous paper supposedly showing that amateur radio causes cancer. I recently found my copy, so if anyone wants me to photocopy it for them, send me an SASE (with a note about what it's for!)

I also wrote an article for our local ham club newsletter debunking the article. If there's interest, I'll see if I can find it and post it.

AL N1AL

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Date: Fri, 22 Jan 1993 22:26:30 GMT  
From: panther!mothost!white!rtsg.mot.com!whitefish!knight@uunet.uu.net  
Subject: Icom U200T manual / info wanted  
To: info-hams@ucsd.edu

I would like to obtain any information, preferably a copy of the owner's manual, for an Icom U200T commercial UHF FM radio. The rig ID plate indicates that it is a UK radio. I would like to take a stab at programming/modifying it for ham band use.

Any data would be greatly appreciated ...

73,

Paul Knight WD8DKY  
paulk@cradhp10.comm.mot.com

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Date: Fri, 22 Jan 1993 21:07:23 GMT  
From: sdd.hp.com!hpscit.sc.hp.com!hplextra!hpl-opus!hpnmrla!donrm@network.UCSD.EDU  
Subject: I PASSED!!! (was Format of Code Exams?)  
To: info-hams@ucsd.edu

In rec.radio.amateur.misc, jahern@geohub.gcn.uoknor.edu (Jud Ahern) writes:

[...]  
> tricky, like: His QTH was Mississippi (T/F?) Answer: False, it was  
> Mississippi). I got all 10 right, but the 10th was a lucky guess.

Geez, are the exam architects still doing stupid stuff like this? If they're looking for exact spelling, why don't they give the code test in five-letter groups like they used to do in the military practice sessions?

I was amazed when I took my last FCC exam -- I should've brought along a Philadelphia Corporation Lawyer to aid deciphering the double negatives, trick questions, etc...

Don Montgomery K6LTS  
donrm@sri.hp.com

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Date: Fri, 22 Jan 1993 20:24:19 GMT  
From: sdd.hp.com!hpscit.sc.hp.com!hplextra!hpl-opus!hpnmrla!alanb@network.UCSD.EDU  
Subject: Log-Yagis  
To: info-hams@ucsd.edu

In rec.radio.amateur.misc, edgar@tid.ES (Eduardo Garcia Lopez) writes:

>In the Radio Handbook (Willian I. Orr, 20th Edition), a PL Yagi for 50 MHz is  
>described. It is reported that this antenna combines the bandwidth of a log-pe  
>riodic antenna and the gain of a Yagi in a notably shorter boom. It is compo  
>sed of an active log-periodic part and some parasitic directors.

In a true log-periodic, only a few of the elements are active on any given frequency. An LP is much bigger for a given gain than a Yagi -- you trade off size for bandwidth.

In a LP Yagi, the Yagi driven element is replaced by a small LP array. In other words, you have a small (typically 2 or 3 element) LP antenna with one or more parasitic elements (reflector and/or directors).

The driven LP array is nice and broadband, but the parasitic elements are not. You probably do get a little better bandwidth than a standard Yagi, but nothing like you would get with a true log periodic.

AL N1AL

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Date: 22 Jan 93 18:30:51 EST  
From: dale.ksc.nasa.gov!titan.ksc.nasa.gov!k4dii.ksc.nasa.gov!user@ames.arpa  
Subject: mfj swr meter info wanted  
To: info-hams@ucsd.edu

In article <1jpedfINN95i@master.cs.rose-hulman.edu>,  
derry@NeXTwork.Rose-Hulman.Edu (John Derry) wrote:  
> Does anyone out there have any firsthand info about the MFJ 160-m through  
> 2-meter swr analyzer with digital freq readout?

Jack-

I recently tried to purchase one of the new MFJ-249 SWR analyzers from AES in Orlando. They tell me the analyzer has been on back order for several months, and that there may have only been a few prototypes actually produced. They didn't know if there was some production problem, or what.

I have the old MFJ-207 HF non-digital analyzer, as well as the MFJ-208 VHF analyzer. They provide a direct SWR readout on an analog meter, with 1:1 at the left end of the scale, 2:1 at center scale and 3:1 at approximately 2/3 scale. Although I have used a separate counter with them, I usually just listen for the signal on my transceiver. Having a built-in counter would be a worthwhile improvement, since the frequency dials on the analyzers are poorly calibrated.

I haven't made any laboratory measurements of their accuracy, but with a known good Bird 50 ohm load, they each indicate exactly 1:1 swr. I have made comparisons using an experimental VHF antenna, using both the VHF analyzer and the Bird Model 43 wattmeter. Center frequency and SWR came out relatively close between the two methods, but not exactly. I do not recall the specifics.

I used the HF analyzer to tune the Hustler resonators for my mobile antenna. I am very impressed with the ease of determining actual frequency of minimum SWR. I used the transceiver to determine frequency. If you have ever tried this with just an SWR bridge, and with resonators that were way off frequency, you can appreciate the advantage the analyzer provides.

Another feature of the new analyzer compared with the older equipment, is the continuous coverage. The HF analyzer I have covers the Ham bands, but

not all frequencies between. If someone wanted to use it to adjust an antenna tuner for receiving foreign broadcasts on a shortwave receiver, the old analyzer would be inadequate. I also am interested in the six meter ham band, which isn't covered by any of the older models I know of.

The price of the new MFJ-249 is \$179.95 in the AES catalog. This is less than the total price I paid for the two that do not include a counter. By the way, the counter doesn't have to be accurate at all, for the intended use. It will just be a bonus if it is!

Although you don't want to hear any "MFJ Bashing", I feel there is some room for that in many of their products. On the other hand, the price you pay is quite fair for what you get. (If you don't think so, check out prices for Bird meters and loads, et cetera!) And so, the MFJ analyzers I have aren't laboratory standard equipment, but they are functional. I plan to get the MFJ-249 as soon as it becomes available.

73, Fred, K4DII

fred-mckenzie@ksc.nasa.gov

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Date: Fri, 22 Jan 1993 20:15:46 GMT  
From: usc!sdd.hp.com!hpscit.sc.hp.com!hplextra!hpl-opus!hpnmcla!  
alanb@network.UCSD.EDU  
Subject: Microwave tube data  
To: info-hams@ucsd.edu

In rec.radio.amateur.misc, Peter.Rojsel@maxlab.lu.SE (Peter Rojsel) writes:

>I have been thinking of trying a little QRO on microwaves. I have in a local  
>junkbox found what appears to be a magnetron. ...  
>The tube has a boat anchor symbol on it and  
>the letters US. I suppose that the symbol stands for US-navy.  
>The manufacturer is: Western Electric, and the type number is: JAN-725A.

I'm not familiar with the part number, but I suspect the magnetron was used in a radar set. If so, it is meant for pulse service with a low duty cycle. You may have trouble getting it to work CW.

AL N1AL

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Date: Fri, 22 Jan 1993 15:23:33 GMT  
From: panix!kb7uv@nyu.arpa  
Subject: Real Hams... ALL!

To: info-hams@ucsd.edu

C'mon, folks, let's cut the crap!

Amateur Radio operators are Amateur Radio operators, period! The fact that the requirements for a particular license class doesn't make the holders of that license any less "hams" than those who hold other class licenses.

And the license is the Technician class license, \*not\* the "no-code Technician" license! Let's drop the pejorative terms, please.

The new requirements for the Tech are a fact. They're not about to be changed back, and the holders of Technician class licensees are not about to give them up. So give this a little thought...

If you want new Amateurs to learn good operating practices, become active with existing clubs and organizations, and in general become good "hams" then talk with them, encourage them, give pointers in a non-abusive manner, and welcome them to your shack and club meetings.

However, if you'd prefer to see new Amateurs using poor operating practices, not identify with the rest of the Amateur community, form new organizations in competition with existing clubs and organizations, and in general have ill will to other Amateurs then go right ahead and use pejorative terms, don't talk with them, etc.

The choice is ours...

Personally I encourage new amateurs to feel a full part of the existing Amateur community. I try to welcome every Amateur I hear with a new callsign. I invite them to club meetings, and I push the clubs I'm part of to have programs of interest to the newly licensed. I invite new hams to my shack. Above all, I make no distinction between Amateurs based upon their license class beyond those imposed upon us by regulation.

Think about it. If we continue, as a group, to alienate Technician class Amateurs we may well find that they soon have their own national organization and that they outnumber those of us with higher license classes. Is this really what we want?

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If you're in the Metro NYC area, particularly in Northern New Jersey, you're invited to participate in the activities of the Radio Amateur Telecommunications Society (RATS). All are welcome, regardless of license class -- even those without licenses are welcome.

73, Andy

--  
----- Andrew Funk, KB7UV -----  
| Chair, Radio Amateur Telecommunications Society (RATS) |  
| ENG Editor/Microwave Control, WCBS-TV Channel 2 News, New York |  
| Internet: kb7uv@panix.com Packet: kb7uv@kb7uv.#nli.ny.usa |

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Date: Fri, 22 Jan 1993 22:42:12 GMT  
From: anomaly.sbs.com!kd1hz@uunet.uu.net  
Subject: Real NoCodes  
To: info-hams@ucsd.edu

REAL NOCODES  
By Michael P. Deignan  
kd1hz@anomaly.sbs.com

1. Real nocodes overuse Q signals on phone. QSL?
2. Real nocodes use a repeater when in a grocerystore talking to their Good Buddy two aisles over. EMP from overhead flourescent lights makes simplex communication impossible.
3. Real nocodes would feel more comfortable if their 2 meter mobile radio only had 40 channels.
4. Real nocodes always have to stop to put some "MotionLotion" into their vehicle, on their way to pick up some "MochaJava" before stopping to "have an eyeball" with a fellow nocode.
5. Real nocodes are in a perpetual state of "studying the code".

Corollary: Real nocodes have boxes of accumulated Element 3B CSCEs.

6. Real nocodes operate HTs with stubduckies in their vehicles and then wonder why they aren't making it into the machine.

Corollary: Real nocodes own Radio Shack HTX202 "Walkie Talkies" with aftermarket "telescopic" antennas.

7. Real nocodes attempt to check into nets on their HTs while in their basement.

8. Real nocodes think a "net" is a new type of antenna.

And yes... Every one of these actually happened.  
Have any others? Email them to me!

Michael P. Deignan, KD1HZ  
Domain: mpd@anomaly.sbs.com  
UUCP: ...!uunet!anomaly!mpd  
Telebit: +1 401 455 0347

I'm not a bigot,  
I hate everyone...

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Date: Fri, 22 Jan 1993 20:00:34 GMT  
From: usc!sdd.hp.com!col.hp.com!news.dtc.hp.com!hpscit.sc.hp.com!hplextra!hplextra!hplopus!hpnmrla!alanb@network.UCSD.EDU  
Subject: running 300-ohm twinlead thru wood  
To: info-hams@ucsd.edu

In rec.radio.amateur.misc, tony@convex.com (honey bunny) writes:

>You can run coax cable pretty much anywhere you like.  
>What about 300-ohm twinlead?

> There are wooden French doors from the shack to the outside world.  
> The twinlead would fit between them and would require no modification  
> to the wood (read: drilling).

>How is the wave-flow going to be affected at the point when the feed  
>goes thru the door - like a kink in a garden hose?

At HF frequencies, I would expect negligible effect on the wave flow.  
Even at VHF, I doubt you would see any appreciable effect.

The only possible problem would be arcing if you run high power and  
the wood were conductive (e.g. wet). If you are worried about this,  
you could cut the twin lead and insert a short section made up of two  
lengths of high-voltage insulated wire (such as that used for  
voltmeter probes, or the center conductor of RG-8 coax, non-foam type.)  
I used this method once to run open-wire feedline under a wooden  
casement window.

AL N1AL

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Date: 23 Jan 1993 04:49:46 GMT

From: usc!sdd.hp.com!col.hp.com!bobw@network.UCSD.EDU  
Subject: TM-732 Intermod (was:Kenwood tm-732 mod/functions)  
To: info-hams@ucsd.edu

jra@law7.DaytonOH.NCR.COM (John Ackermann) writes:

>  
> I also just bought a TM-732. My joy at this tiny radio dimmed a whole  
> lot when I discovered that along with (and probably because of) the most  
> sensitive receiver I've ever seen, it's also the most prone to intermod  
> and/or overload.  
>  
> The damn thing is unusable in an urban environment -- I'm not talking  
> about a bit of grunge when sitting right under the local tower farm, I'm  
> talking about full-scale pager grunge in places where my dual-band  
> Alinco HT doesn't hear a peep.  
>  
[stuff deleted]  
> Apart from this very significant problem, the radio is great.  
>  
> Anyone else experience this intermod/overload problem, or cure it?  
>  
>  
> --  
> John R. Ackermann, Jr. Law Department, NCR Corporation, Dayton, Ohio  
> (513) 445-2966 John.Ackermann@daytonoh.ncr.com  
> Packet Radio: ag9v@n8acv.oh tcp/ip: ag9v@ag9v.ampr [44.70.12.232]

Yep. I have the same problem. It turns out that a paging transmitter  
on 462.something MHz is giving me the most problem. I built a tuned  
stub to notch it out and the problem seems to have gone away. At least,  
its at a low enough level that its not really a problem. I can now drive  
up to one of the local hot radio sites without picking up a million  
different signals. (The pager was apparently intermodulating with the  
other signals.) I didn't have much trouble on VHF, just UHF.

I sent a letter to Kenwood and they say to send the radio in and  
they'll fix it. I am skeptical.

A great radio if the receiver performance was better. Kind of like  
saying "a great boat except that it sinks".

Bob Witte / HP Colo Springs / bobw@col.hp.com / KB0CY

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Date: 22 Jan 93 13:48:41 GMT

From: opel!slc1!vk2bea!michael@uunet.uu.net  
To: info-hams@ucsd.edu

References <N4HY.93Jan13123853@growler.UUCP>,  
<ljh1.727138716@crux1.cit.cornell.edu>, <N4HY.93Jan19133058@wahoo.UUCP>%  
Reply-To : michael@vk2bea.UUCP (Michael G. Katzmann)  
Subject : Re: Anybody want to talk about Clover?

In article <N4HY.93Jan19133058@wahoo.UUCP> n4hy@wahoo.UUCP (Bob McGwier) writes:  
>

>AMTOR is the only amateur mode that has used FEC so far as I know until  
>Clover came along.

>

Only mode B amtor has FEC, and even that is really just the transmission  
of the characters twice (not particularly efficient. cf. Hamming/Viterbi/  
Reed Solomon).

Both mode A and B have a simple form of error detection. (fixed ratio of marks  
and spaces)

--  
Michael Katzmann > Broadcast Sports Technology Inc.  
~~~~~ < Crofton, Maryland. U.S.A  
Amateur Radio Stations: >  
NV3Z / VK2BEA / G4NYV / AAR3VK < opel!vk2bea!michael@uunet.uu.net

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End of Info-Hams Digest V93 #99

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